

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
13 May 2004 (13.05.2004)

PCT

(10) International Publication Number  
**WO 2004/039283 A3**

(51) International Patent Classification<sup>7</sup>: **A61F 2/44**

(74) Agent: MEYER, Sheldon, R.; Fliesler Meyer LLP, Four Embarcadero Center, Suite 400, San Francisco, CA 94111-4156 (US).

(21) International Application Number:  
PCT/US2003/033799

(22) International Filing Date: 27 October 2003 (27.10.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/422,020 29 October 2002 (29.10.2002) US  
10/685,139 14 October 2003 (14.10.2003) US

(71) Applicant: ST. FRANCIS MEDICAL TECHNOLOGIES, INC. [US/US]; 1900 Bates Avenue - Suite L, Concord, CA 94520 (US).

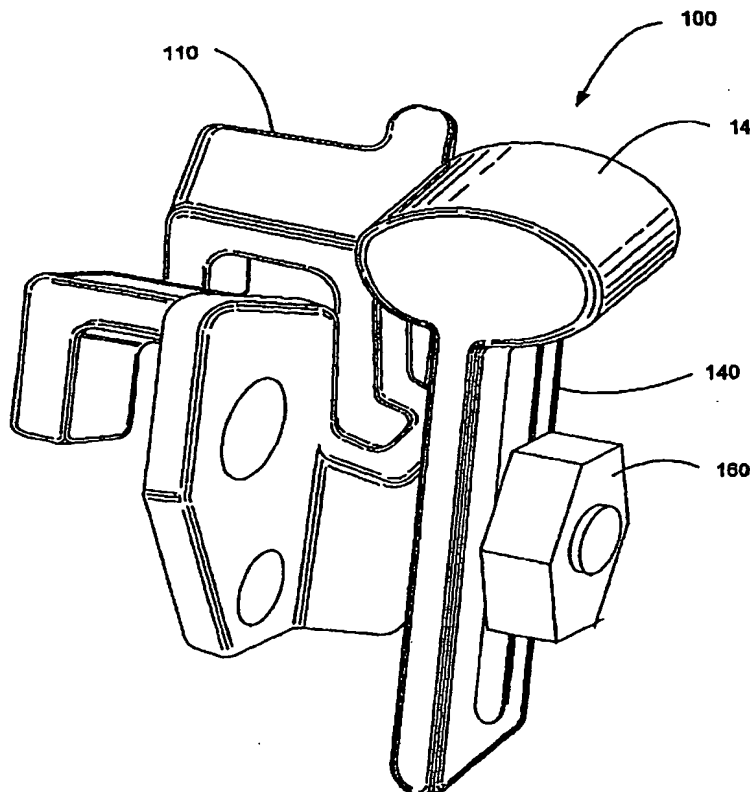
(72) Inventor: MITCHELL, Steve; 776 Duke Circle, Pleasant Hill, CA 94523 (US).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: INTERSPINOUS PROCESS AND SACRUM IMPLANT AND METHOD



(57) Abstract: The present invention is an implant (100) for the lumbosacral region of the spine. The implant (100) alleviates pain and increases lumbosacral stability while being minimally invasive. The beam (140) of the implant (100) engages the spinous process of the L5 vertebrae to spread the mechanical load from the vertebrae through the device (100).



**Published:**

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**(88) Date of publication of the international search report:**

13 January 2005

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/33799

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61F 2/44

US CL : 623/17.11

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 623/17.11, 17.15; 606/61

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
EAST, implant, hook, spinal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6,458,131 B1 (RAY) 01 October 2002 (01.10.2002), see entire document. ✓	1-5,7,43-56,58-81
X	US 5,527,312 A (RAY) 18 June 1996 (18.06.1996), see entire document. ✓	1-5,7,43-56,58-81
X	US 5,454,812 A (LIN) 03 October 1995 (03.10.1995), see entire document. ✓	1-5, 7,43-56, 58-81
A	US 5,352,225 A (YUAN et al) 04 October 1994 (04.10.1994), see entire document. ✓	1-5,7,43-56,58-81
X	US 6,048,342 A (ZUCHERMAN et al) 11 April 2000 (11.04.2000), see entire document.	1-5,7,43-56,58-81
X	US 6,068,630 A (ZUCHERMAN et al) 30 May 2000 (30.05.2000), see entire document. ✓	1-5,7,43-56,58-81
A	US 2001/0012938 A1 (ZUCHERMAN et al) 09 August 2001 (09.08.2001), see entire document. ✓	1-5,7,43-56,58-81

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

16 October 2004 (16.10.2004)

Date of mailing of the international search report

15 NOV 2004

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Facsimile No. (703)305-3230

Authorized officer

Kevin P. Shaver *A. Shaver*

Telephone No. 703-308-1148

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/33799

## Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claim Nos.: 6,8-42 and 57  
because they relate to subject matter not required to be searched by this Authority, namely:  
claims claimed part of human body.
2. ☐ Claim Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such  
an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claim Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all  
searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite  
payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report  
covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is  
restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☐  
☐

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.